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Current global and national trends and challenges and their impact on education

Report of the Secretary-General

Summary

After a period of uneven recovery, the slowdown in global economic growth is expected to continue. Developing countries are increasingly an important source of stability and continue to be the major drivers of growth. However, major risks to both economic and social development persist, including an overreliance on short-term policy measures, exchange rate volatility and a renewed widening of global imbalances. A lack of decent work opportunities and rising food prices continue to pose challenges to many countries, straining national budgets and putting pressure on household disposable incomes. In developing countries and particularly in the least developed countries, those trends could constitute a major setback to sustainable development efforts, in particular the eradication of extreme poverty and hunger. Against that backdrop, the present report provides an analysis of the impact of current global trends on the internationally agreed development goals in regard to education and makes a number of recommendations to deal with those challenges.

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I. Introduction

1. The present report provides an analysis of current global trends and challenges and their impact on increasing access to and improving the quality of education. In addition to recent developments in the global economy, the report highlights key trends with implications for education systems, including the following: job insecurity and rising inequalities; food insecurity; migration patterns; climate change and disaster risks; conflict and human insecurity; and technological innovations. The report includes action-oriented recommendations for managing both the short- and long-term effects of those trends on education and proposes opportunities for maintaining and improving progress towards education and learning for all.

2. Section II of the present report gives a global overview of current economic and social conditions, with a particular focus on developing countries. Section III provides an analysis of the impact of those trends and presents ideas and proposals on how the challenges they pose might be turned into opportunities for education systems. Section IV offers recommendations that are considered crucial in overcoming the negative impact of current trends on education, with a view to informing effective policy actions.

3. The present report should be read in conjunction with the forthcoming report of the Secretary-General for the annual ministerial review on the theme "Implementing the internationally agreed goals and commitments in regard to education".

II. Global overview of emerging trends and challenges

A. Global economic outlook

4. After a year of steady but uneven improvement, global economic growth began to decelerate in mid-2010, signalling a fragile recovery in 2011 and beyond. A rapid shift from fiscal stimulus to austerity in major economies could have a negative impact on the growth of gross domestic product (GDP) and public spending in those countries. Moreover, it would jeopardize the ongoing recovery and widen global imbalances, which in turn could feed more instability into the global economy.

5. Robust but slower economic growth in many developing countries continues to drive the global recovery, contributing to more than half of the world's economic expansion since late 2009. In contrast to previous economic recessions, many developing countries, particularly emerging economies, were better prepared and were able to implement stimulus spending by using ample fiscal space and vast foreign-exchange reserves accumulated in the years before the crisis. That boosted domestic demand and facilitated a relatively quick recovery from the global downturn. Those countries have also led the recovery of international trade, building on South-South linkages among developing countries and, in turn, benefiting smaller economies in Asia and Latin America. By late 2010, developing country trade and industrial output had climbed to above pre-crisis levels.

6. Nonetheless, formidable challenges remain, especially for the least developed countries, for which the global crisis exacerbated ongoing obstacles to economic

and social development efforts. Many of those countries continue to face special political and security situations, and their rate of recovery in GDP growth is expected to be well below the annual average of 5 per cent achieved from 2004 to 2007. Whether growth in other developing countries can be sustained is also uncertain. Despite strengthened South-South trade linkages, developing countries remain highly dependent on demand in developed countries for their exports. Access to capital flows and official development assistance is also conditioned by financial circumstances in developed countries. More recently, the surge in private capital flows to many developing countries has caused upward pressure on their currencies and could lead to domestic asset bubbles.[1]

B. Job insecurity

7. Between 2007 and 2009, 30 million jobs were lost worldwide as a result of the financial crisis. Global unemployment remains at record highs for the third year since the start of the crisis. Despite a rebound in employment in Asia and Latin America, the global economy will still need to create at least another 22 million new jobs, 8 million of them in developing countries, in order to return to pre-crisis levels of employment. The longer-term consequences are already becoming visible, as the share of the structurally or long-term unemployed has increased significantly in many, mostly developed countries since 2007.

8. In developing countries the situation threatens to exacerbate the lack of decent work that existed before the crisis. Despite the rebound from brief drops in employment in developing countries, vulnerable employment, underemployment and the downward pressure on wages continue to pose serious challenges there. Constrained household incomes could reduce household investment in children's education and health, which might slow down the rate of progress made in recent years on poverty reduction and social development.

9. Youth were vulnerable to unemployment even before the recent crisis, and their ongoing exclusion from labour markets, in developing and developed countries alike, is a mounting global concern. At the end of 2009, there were an estimated 81 million unemployed young people worldwide. They are almost three times more likely to be unemployed as adults. Those figures do not take into consideration the large number of young people who are too discouraged to seek work and therefore are not captured in official unemployment figures.

C. Global food prices

10. Prices for most agricultural commodities have been increasing since the second half of 2010 due to a number of factors, including unexpected shortfalls in supply caused by adverse weather events, policy responses by some exporting countries and fluctuations in currency markets. Higher food prices affect countries differently depending on whether they are net exporters or importers of food. Because the majority of developing countries are net food importers, populations in those countries are affected disproportionately by price increases.

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[1] *World Economic Situation and Prospects 2011* (United Nations publication, Sales No. E.11.II.C.2).

11. The rise in food prices occurs at a time when the number of undernourished people in the world remains near the 1 billion mark, despite a brief decline in 2010 for the first time since 1995. That decline is largely attributable to economic growth in developing countries in 2010 and a temporary fall in international food prices in 2009. Food prices remain volatile, however, and are estimated to have pushed an additional 44 million people into poverty in developing countries since June 2010. The rise in food prices has posed new challenges for the marginalized, including persons with disabilities, by further limiting their access to food and basic nutrition.

D. Migration patterns

12. After a long period of steady increases in international migration, global migration flows contracted in 2008 and 2009.[2]

13. During this period, a number of host countries implemented policies to provide incentives to facilitate the return of migrant workers to their countries of origin. However, large-scale returns of migrants have not taken place. A majority of migrants are well integrated in their countries of residence, and their economic prospects at home are rarely better than those in their countries of residence.

14. Migrant workers have been hard hit by rising levels of unemployment in most countries, partly because they are concentrated in economic sectors, such as construction, manufacturing and tourism, that have been adversely affected by the economic downturn and partly because they tend to face discrimination in labour markets. Migrants' job insecurity is often compounded by limited access to social protection programmes. Despite the fact that migrants have fared disproportionately worse than their local peers in many countries, the crisis has contributed to a resurgence of xenophobia and thus underscored the importance of taking effective measures to protect migrant rights.

15. In 2009, remittances to low- and middle-income countries fell for the first time since 1980, reaching $316 billion, or $20 billion less than in 2008. Decreased remittances were most pronounced for migrant populations concentrated in the developed countries that were hit hardest by the global financial and economic crisis, such as migrants from Latin America and the Caribbean working in Spain or the United States of America. However, remittances have been more resilient to the effects of the crises than other types of financial flows, including development finance, and are predicted to rebound in 2011.

E. Environmental crises and climate change

16. The challenges posed by environmental crises, including climate change and natural disasters, increasingly add considerable stress to societies, ranging from changing weather patterns that threaten food production to rising sea levels that increase the risk of catastrophic flooding. It is a complex global challenge intertwined with vulnerabilities caused by poverty and rapid urbanization, ecosystem decline and unsustainable economic growth patterns. The flooding in Pakistan and the earthquake in Haiti in 2010 underscored the multiple

[2] Organization for Economic Cooperation and Development, *International Migration Outlook 2010* (Paris, 2010).

vulnerabilities faced by communities in the event of natural disasters and their aftermath.

17. The increase in disaster risks caused by environmental crises tends to have the most devastating impact in developing countries. The effects of climate change magnify the uneven social and geographic distribution of disaster risk, increasing the risks already faced by the poor and further amplifying poverty. Least developed countries and small island developing States are especially vulnerable, given that they rely heavily on climate-sensitive sectors and have limited capacities for resilience and high levels of poverty and unemployment.

F. Armed conflict

18. In 2009, 80 countries faced deadlock, tension or armed conflict as they sought to address longer-term development challenges, 19 of which were on the agendas of the Security Council and the Peacebuilding Commission. Before the financial crisis hit, conflict-affected States already lacked the resources to adequately respond to economic and environmental shocks. In those contexts, civilians are confronted with the erosion of central authority and the rule of law, internal displacement through forced migration, the destruction of infrastructure and services, and high levels of violence against women and children. In addition, children and youth are often forcibly recruited into combat.

19. The increased duration of many of those conflicts is one of the central challenges to achieving sustainable development. Over the last decade, more than 2 million children died as a direct result of armed conflict, and at least 6 million children were seriously injured or permanently disabled. Furthermore, 12 of the 25 countries with the lowest adult literacy rates are in a state of conflict or reconstruction. Beyond those effects, prolonged armed conflicts can undermine economic growth and reinforce high levels of poverty, with one study estimating that civil war tends to reduce economic growth by 2.3 per cent a year.[3]

G. Advances in information and communications technology

20. Information and communications technology (ICT) increasingly underpins most human activity, making its availability and use critical to the advancement of sustainable development. Cheap and easy access to new digital resources has accelerated the diffusion of best-practice technologies. There are currently more than 5 billion mobile cellular subscriptions worldwide, and around 2 billion people have access to the Internet.[4] Like mobile technology and the early Internet, broadband is set to be the next transformational technology for the sector. Broadband networks act as enablers more than previous technologies by bringing knowledge-sharing and education services to people wherever they live and by leveraging opportunities for lifelong learning and training.

21. However, approximately 5 billion out of the 7 billion world's inhabitants have no direct access to the Internet. While more basic needs might take precedence in many poor communities, equitable access to ICT and digital resources can expand

[3] Paul Collier, *The Bottom Billion* (New York, Oxford University Press, 2007).

[4] See www.itu.int/ITU-D/ict/material/FactsFigures2010.pdf.

users' knowledge and promote poverty reduction. There is now widespread evidence that poor communities can benefit from access to ICT that helps to increase the ease of communications and financial transfers, reduce transaction costs, integrate local and global markets, expand human capital accumulation and empower people.

H. Development finance

22. Although official development assistance flows continued to rise in 2009, members of the OECD Development Assistance Committee as a whole did not meet their aid volume targets in 2010. The most recent data for Development Assistance Committee donors show that total aid reached almost $120 billion in 2009, or 0.31 per cent of combined donor country gross national income (GNI). No intermediate targets have been adopted for 2011 and beyond, leaving the United Nations goal, 0.7 per cent of developed countries' GNI to official development assistance, as the remaining applicable benchmark. By that measure, the delivery gap in 2009 was $153 billion.[5] That is despite the fact that the impact of the financial and food crises increased the need for some developing countries to secure substantial additional financial support. Delivery on aid targets for least developed countries, in particular, has been disappointing.

23. Concerns persist about how austerity measures in developed countries will have an impact on future aid commitments, with several bilateral donors recently announcing specific cuts to basic education within their development finance programmes. Although developed countries account for the majority of global development finance, other actors, such as emerging donors and providers of South-South cooperation, are becoming major contributors to international development efforts. Total net development assistance from non-Development Assistance Committee donors was estimated to be between $12 billion and $14 billion in 2008, which represents between 9 and 10 per cent of global official development assistance.[6] Private funding resources from major philanthropic foundations and non-governmental organizations continue to be important providers of international development assistance, although their portfolios are often dominated by the health sector and sectors other than education.

III. Impact of the current trends and challenges on education

A. Domestic spending on education

24. Fiscal pressures on Government budgets remain a source of concern for education financing in the wake of the 2008 financial crisis and the ongoing global recovery. Although education expenditure generally increased over the past decade in most developing countries, losses of revenue associated with lower growth or a deteriorating trade environment might translate into reduced public spending or unsustainable fiscal deficits. Because of decreased public revenue and pressure on budgets as a result of the crisis, developing countries could face a trade-off between

[5] *The MDG Gap Task Force Report 2010: The Global Partnership for Development at a Critical Juncture* (United Nations publication, Sales No. E.10.I.12).

[6] OECD, Beyond the DAC: the welcome role of other providers of development cooperation. Available from www.oecd.org/dataoecd/58/24/45361474.pdf.

maintaining fiscal balance and pre-crisis levels of public expenditure on education. Although many Governments in developing countries have protected vital social sector budgets thus far, there is less certainty that post-crisis Government spending plans in education reflect pre-crisis commitments to the financing needs to achieve education and learning for all.

25. Real-time monitoring of education budgets is difficult, but a recent survey conducted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) of changes in education spending between 2009 and 2010 in 28 developing countries revealed that some Governments have revised their budget downward to reflect declines in revenue. In the survey, seven of the lowest income countries made cuts to education spending and six of the lower middle-income countries reported budget allocations for 2010 that were lower than spending levels in 2009.[7] Looking ahead, planned fiscal adjustments that rely on spending cuts could increase the trend in many countries, both developing and developed.

26. Decreased education expenditure could jeopardize progress made by many developing countries in increasing enrolment levels since 2000. An analysis of global data indicates that instead of the pre-crisis prediction that the number of out-of-school children would fall from 72 million to 29 million between 2010 and 2015, the number is more likely to plateau at around 56 million as a result of the crisis and its impact on financing for education.[8] In general, where education budgets were cut as a result of the crisis, financing for post-primary levels of education suffered the most. Even though expenditure on primary education appeared relatively protected, an estimated 6.2 million additional classrooms are still needed in primary and pre-primary education in order to accommodate the increase in enrolment required to achieve the goals set by the Education for All movement.[9]

27. The capacity of developing countries to finance increased recruitment of trained, motivated teachers and investment in infrastructure is also affected by the current slowdown in the global economy. As a result, some countries have overrelied on poorly qualified, poorly paid teachers with few or no opportunities for professional development, resulting in poor teacher morale, absenteeism and high turnover of well-qualified staff. More than 1.9 million teachers are still needed globally for the achievement of universal primary education, more than half of whom are required in sub-Saharan Africa.[7]

28. In countries where school enrolments are rising rapidly, marginal or negative growth of education expenditure can translate into a reduction in per pupil spending. This not only impedes access but also exacerbates limited learning achievement in many education sectors. As highlighted in a recent UNESCO study of national education budgets, recent cuts to education in developing countries tend to be concentrated in areas that specifically affect its quality: textbooks, materials, school-based nutrition and health programmes.[7] Because the most marginalized children often attend the poorest-quality schools, cuts to critical educational materials only

[7] UNESCO, *Education for All Global Monitoring Report 2011: The hidden crisis — Armed conflict and education* (Paris, 2011).

[8] UNESCO, *Education for All Global Monitoring Report 2010: Reaching the marginalized* (Paris, 2010).

[9] UNESCO, The Impact of the Global Financial and Economic Crisis on the Education Sector, No. 1: The Impact of the Crisis on Public Expenditure on Education — Findings from the UNESCO Quick Survey, document ED/EPS/2009/PI/1.

add to their learning disadvantages. Rural children, most specifically rural girls and children with disabilities, represent the majority of those who are excluded from school.

29. Governments must plan for increases in the recurrent costs that occur as a result of a sustained push for investment in infrastructure and teacher recruitment. Levels of financing cannot be viewed in isolation; the efficiency and equity of public spending are also critical. Countries with accountable public expenditure management systems and multi-year, multisectoral planning systems are more likely to translate increased investment into real improvement.

B. Income shocks and the protection of household investment in education

30. The combined financial and food crises contributed to a decline in disposable incomes among households in one third of developing countries from 2008 to 2010, pushing poverty rates upward in comparison to pre-crisis forecasts.[10] In order to cope with income shocks caused by job insecurity, decreases in labour income and rising commodity prices, previous crises have shown that poor households tend to cut back on education spending or withdraw their children from school. When households lose stable income, they may no longer be able to afford the direct costs of schooling. Increased opportunity costs might mean that children leave school in order to work to support their families. That locks families into vicious circles of poverty as children fall behind and, even if they return to school, face long-lasting learning gaps. Although not all of the effects of decreasing household incomes on education investment are straightforward, and demand for education sometimes increases during temporary periods of economic hardship, the overall effects remain harmful to children's education and general well-being.

31. Income shocks to poor households often have a disproportionate impact on the well-being of girls relative to that of boys, with particularly strong effects on their education. During economic downturns, girls' access to education and health services can deteriorate much more rapidly than the progress made during periods of economic growth. A recent World Bank analysis of human development indicators in 163 countries between 1980 and 2008 revealed that primary education completion rates plummet 29 per cent for girls and 22 per cent for boys (from the overall mean; all countries) during periods of economic contraction, and rise only 5 per cent for girls and 3 per cent for boys during economic accelerations.[10] Female-to-male enrolment ratios for primary, secondary and tertiary education follow similar patterns, with ratios improving steadily but slowly during good times and dropping precipitously, particularly at the tertiary level, during bad times. Such gender-based effects on child schooling were greatest in developing countries.

32. The economic crisis and its impact on household incomes have increased demand for social protection schemes in developing and developed countries alike. By helping poor households manage risk without compromising long-term welfare, social protection programmes safeguard children's enrolment and educational attainment during periods of economic hardship. In addition to reducing destitution,

[10] International Monetary Fund and the World Bank, *Global Monitoring Report 2010: The MDGs after the Crisis* (Washington, D.C., 2010).

social protection programmes such as employment-based safety nets and cash and food transfers provide incentives to struggling households to support children's education, health and nutrition.

33. Although the range and design of social protection programmes vary, there is widespread evidence that associates such programmes with positive effects on children's education, with a particularly strong impact on school enrolment and grade progression. They can be designed specifically to compensate households for the direct costs of attending school and buying related goods. Those can take the form of subsidies or grants to education and can either be offered on a universal basis or, more commonly, targeted to marginalized groups within the education system (including girls, children with disabilities and indigenous peoples). Similarly, scholarships that provide students from disadvantaged groups with conditional cash transfers reduce the opportunity costs of not participating in remunerated occupations, thus influencing higher enrolment and permanence rates in the school system.

34. In order to ensure that households can build their resilience and keep children in school over the long run, social protection programmes should be complemented by "second chance" and adult education opportunities as well as job search assistance. Programmes that build twenty-first century skills and offer technical and vocational education and training can help ensure that adults and youth who are out of work, underemployed or adapting to new work sectors maintain contact with labour markets. Technical and vocational education and training programmes are a fundamental ingredient to the transition of workers from informal, vulnerable sectors towards more productive, sustainable sectors linked to emerging "green" industries and the knowledge economy.

35. For youth in both developing and developed countries, failure in their first experience on the labour market is often difficult to make up and can expose them to lifelong reductions in earnings and well-being. In general, the effect is even more pronounced among young people from marginalized groups. Concerns about quality and relevance in basic education come as the demand for transferable twenty-first century skills, such as problem solving, information management and communication skills, is increasing. Although they hold great potential for linking youth to the world of work, traditional technical and vocational education and training systems are often considered second-rate, separate-track education, characterized by underinvestment and a lack of relevance. As part of a more general transformation in strengthening school-to-work transitions, technical and vocational education and training programmes and apprenticeships should be better integrated into general education curricula and designed with local labour market demands in mind.

C. Food insecurity, nutrition and learning achievement

36. The current volatility in food prices might force poor families to choose between their children's health and education. An increase in food prices is particularly lethal for poor households, which spend between 50 and 70 per cent of their incomes on food in many developing countries. Higher food prices can have an immediate impact on the level and diversity of food consumption in poor households and can lead to an increase in hunger and in the number of out-of-school children. Emerging evidence from the 2008 spike in food prices indicates that

children in developing countries decreased school attendance as a result of increased food-related expenses, with reduced education spending reported by almost half of the households surveyed in one country.

37. The effects of higher food prices have an impact not only on children's school attendance but also on the effectiveness of learning in the classroom. Short-term hunger, common in children who do not eat before going to school, results in difficulty concentrating and performing complex tasks, even if the child is otherwise well-nourished. Currently, an estimated 60 million children attend school hungry, about 40 per cent of them in Africa. In addition to the effects of short-term hunger, chronic undernutrition and micronutrient deficiencies affect overall brain development and cognitive functions. Nutrition-based interventions, such as school feeding programmes, have been shown to reverse that. School feeding offers an incentive for households to send their children to school and receive an education, while simultaneously reducing short-term hunger and improving their learning potential.

38. Smallholder farmers and their families represent some 2 billion people, about one third of the global population, and are central to any solution to the current food crisis and to sustainable development efforts. Education and training for agricultural productivity is critical to supporting the livelihoods of rural households and ensuring more efficient and effective linkages with urban markets, where rises in food prices tend to have the strongest effect on households. Making training resources available to smallholder farmers in the near term to reduce their specific constraints will result in a serious boost to food production. In particular, training and technical education programmes on topics including market and price information, local seed multiplication, small-scale irrigation techniques and soil conservation schemes could create productivity gains in smallholder farming. Such training resources might reduce pressure on prices in local markets, thereby contributing to improvements in access for urban net food-buying families and, in turn, improvements in their nutritional status.

D. Migration and investment in education

39. Migrant remittances help fund education-related expenses in recipient countries. In some developing countries, as much as one quarter of remittance income has been shown to go towards education. Remittance flows are not only more resilient to economic shocks than other capital flows but are also more likely to benefit poor households directly. Families with migrants working abroad tend to be more likely to send their children to school, using cash from remittances to pay school fees and other costs. Recent research has also shown that once in school, the children in recipient households are more likely to progress through school without interruptions.[11] In addition to financial remittances, "social" remittances, the ideas, practices and social capital that flow back to families and communities in migrants' origin countries, can also bolster households' commitment to education and promote the expansion of local education infrastructure. At the same time, the emigration of a parent or guardian can have unintended effects on children, who often face long and sometimes indefinite periods of separation from important family members.

[11] United Nations Development Programme, *Human Development Report 2009: Overcoming barriers — Human mobility and development* (United Nations publication, Sales No. 09.III.B.1).

40. While migration often expands options for education and employment opportunities for individuals, it can also contribute to acute human resource shortages in communities of origin. A number of developing countries continue to see large proportions of their secondary- and tertiary-educated citizens, particularly those trained in health and education, emigrate to developed countries. The International Organization for Migration estimates that about 20,000 skilled professionals have left Africa each year since 1990.[12] The pull of skilled workers to better work opportunities could weaken developing countries' prospects for building successful education systems as well as prospects for national skills development.

41. Within countries, internal migration from rural to urban areas continues apace, in part because of the "urban advantage" in accessing jobs and services, including education. However, most urban growth is occurring in towns and cities where education systems are generally struggling to meet the demand of the existing population and access to newcomers is either restricted or generally of poor quality. National education plans have focused predominantly on reducing the urban/rural gap in access to and quality of education; it must be balanced by taking into consideration the widening divide between rich and poor children in many urban areas, where population growth is expanding most rapidly.

E. Environmental crises, education for sustainable development and climate change

42. Environmental crises profoundly affect the lives of millions of children each year, as they result in large-scale disruption to vulnerable communities and the delivery of public services, including education. Increases in the frequency and severity of crises caused by natural disasters and the effects of climate change expose children to a number of risks. As highlighted by a recent report of the United Nations Children's Fund on the impact of three recent environmental crises on children in small island developing States, the crises were associated with short- and medium-term increases in the risk of physical injury and death, displacement and separation from family, vector- and water-borne diseases of affected children, as well as general declines in well-being.

43. The most obvious and immediate impact of environmental crises on education is the disruption of children's educational progress, which can cause long-term learning gaps due to lost school hours and the destruction of infrastructure such as schools, roads, electricity and clean water supplies. In addition to restricting children's learning, damaged infrastructure compounds the post-disaster response since safe, secure schools are natural entry points for communities needing emergency shelter, nutrition and health care. The damage is not only physical but also economic and psychological. The economic impact is all too apparent in developing countries, where natural disasters can quickly destroy years of progress in expanding education and other public services. The psychological impact can be devastating and long-lasting, especially for young children who might not comprehend their cause.

44. Experiences from both developing and developed countries have shown that investments in disaster risk reduction through education can result in changes in

[12] International Organization for Migration, *Diaspora Dialogues* (Geneva, 2007).

perceptions and patterns of behaviour that reduce the risks and costs of environmental crises and produce long-term benefits. Participatory, hands-on learning exercises for disaster risk reduction have demonstrated particularly effective results in ensuring that children are prepared for the environmental crises their communities face. More generally, recent findings suggest that the inclusive education of girls and women is associated with reduced household vulnerability to death and injury during environmental crises. The United Nations Hyogo Framework for Action 2005-2015 offers guidance on education for disaster risk reduction, prioritizing adherence to safe school construction standards, the integration of evacuation and emergency plans into learning activities and the promotion of environmental stewardship in relation to local ecosystems, as well as guidelines for education systems operating in post-disaster contexts.

45. Considering the anticipated risks from the effects of climate change on increasing environmental crises, education for sustainable development offers an opportunity to combat climate change by contributing to mitigation efforts and building capacities to increase community resilience. A focus on education for sustainable development in both developing and developed countries can promote a better understanding of local environments, change consumption and production patterns and help anticipate risks from climate change and other future development challenges. In the current global context in which the quality and relevance of education continues to gain urgency, for education for sustainable development to be effective, it should centre on the scientific literacy and problem-solving skills needed to cope with new environmental challenges.

46. Some Governments have begun integrating modules on climate change, disaster risk reduction and sustainable development into school curricula and informal learning programmes. Despite the advances being made, a lack of institutional, financial and technical capacities in both developing and developed countries continues to impede the full implementation of these components into education systems. In order to address that, a better evidence base is still needed on the most effective measures for mainstreaming climate change, disaster risk reduction and sustainable development into education systems.

F. Armed conflict and education for conflict mitigation and resolution

47. Over 40 per cent of the world's out-of-school children live in conflict-affected States, where traditional barriers to education: distance, language and school fees, are compounded by high levels of violence. Children in conflict-affected countries are twice as likely to die before their fifth birthday as children in other poor countries. The average duration of violent conflicts in low-income countries over the last decade was 12 years, creating devastating learning gaps for children unable to attend school safely. Increasingly, schools, schoolchildren and teachers are being targeted deliberately in conflict settings.[7]

48. Girls' physical security and access to quality education is especially threatened in conflict-affected States. The widespread, systematic use of sexual and gender-based violence against girls and women in these settings undermines not only their human rights and physical security but also their future potential to learn because of psychological trauma and stigmatization. In several current conflicts, girls' schools have been targeted specifically by armed groups opposed to gender equality and the

empowerment of women. In that respect, the situation of indigenous women and girls is particularly vulnerable, given that many conflicts are in indigenous areas.

49. Conflict also destroys the education infrastructure in a country, in terms of both physical structures and human resource capacity. Schools are often targeted as symbols of State institutions or because of their affiliation with particular social groups. In a review of the impact of conflict on children's education, a recent study noted that 45 per cent of the schools and education-related infrastructure had been destroyed during the conflict. The supply of teachers and education administrators can also become scarce as a result of death in conflict, conflict-induced disease or low levels of human capital formation.

50. Schools are often ill adapted to provide the necessary assistance to help children catch up and reintegrate into safe learning environments. National education programmes must include "levelling up" programmes for children who have had absences from the education system owing to conflict and other situations beyond their control. Non-formal schooling or "catch-up" programmes should be used to reintegrate children into education systems, with careful consideration given to the particular needs of youth ex-combatants.

51. Special efforts must also be made for provision of education, school meals and take-home rations, as well as other basic services to displaced people and other communities affected by conflict. Displaced children are exposed to a number of protection risks, such as ongoing insecurity, sexual and gender-based violence and recruitment by armed groups, in school and en route to school. In host countries, refugees are rarely permitted to attend local schools, and as a result, many refugees have no other choice but to set up their own schools resulting in substandard education with unqualified teachers and poor-quality curricula. That makes it all the more difficult for them to enter or re-enter education systems if and when the opportunity arises.

52. Because post-conflict reconstruction presents opportunities for reform of education systems, intersectoral policies are needed in order to address the special needs of youth in such contexts, including quality education that emphasizes conflict resolution, relevant skills and access to decent jobs. Although education can be used as a force for peace in societies at risk of or emerging from conflict, intra-group grievances are sometimes intensified in schools by curricula, teaching methods or a general environment of intolerance, prejudice and fear. The challenge of simultaneous reform and reconstruction at a time of constrained human, financial and institutional resources and considerable urgency calls for particular attention to priorities and sequencing of interventions. As each context differs, the way Governments integrate education as part of a wider peacebuilding strategy can have wider implications. In order to mitigate the risk of conflict, a critical first step that Governments must take is to ensure that schools are child-centred, secure and unequivocally non-violent spaces. Governments should carefully identify potential grievances within education systems by analysing, in particular, the language(s) of instruction, the teaching of history and religion, curriculum development for peace and citizenship and the devolution of education governance.[7]

G. Recent innovations in information and communications technology and education

53. The positive impact of education on socio-economic development is interlinked with the teaching of innovation, knowledge creation, the development of creative capacities and the ability to absorb and use new technologies. ICT literacy is increasingly considered a central part of normal cognitive skills development, and there is a growing trend to use ICT-supported online learning in education systems. Internet access makes available to millions of users in developing countries vast digital libraries of knowledge resources, supporting both formal and informal learning. ICT can reach societies that do not have access to educational institutions, thereby promoting lifelong learning at all life-cycle stages for disadvantaged groups, including early school leavers, older people and persons with disabilities.

54. The broad sharing of educational resources and services, in particular through the use of open educational resources, holds great potential for improving the quality of under-resourced education systems and for facilitating informal learning opportunities. Open educational resources are increasingly being used by many of the world's best schools and can be accessed by students (both formal and informal) and teachers around the globe. Open educational resources can be used by educators to improve the quality of their instruction; by students to enhance their current learning activities; and by lifelong learners who wish to continue their education after formal schooling.

55. The growing popularity of online learning is challenging many assumptions about how education should be delivered. Depending on the availability of the required technological infrastructure, the trend could lead to the transformation of education systems in terms of the design of curricula and the delivery of course credits and diplomas. Even in the absence of highly advanced technological infrastructure, mobile devices, Internet kiosks, cloud computing and solar energy have made possible various forms of online learning and knowledge sharing that are user-directed and can be utilized in support of learners who are outside conventional educational frameworks.

IV. Managing the impact of current global and national trends and challenges in regard to education

56. Many of the current trends require policy responses that mitigate negative effects on education and learning in both the short- and long-term and take advantage of the positive effects.

A. Securing stable education expenditure

57. There is no substitute for national political leadership in combating children's lack of access to quality education. National commitments to public expenditure on education can catalyse development efforts, lead to greater long-term efficiency and improve equality of opportunity. **Policymakers in both developing and developed countries should sustain and increase social expenditure, in particular for the most vulnerable. However, the efficiency and effectiveness of current domestic spending is as important as the level of spending. Recent studies increasingly**

reveal that higher levels of spending alone do not necessarily translate into improved education outcomes. Governments should carefully analyse how education expenditure is allocated and adjust policies to prioritize areas requiring the most attention.

58. Redistributive public spending is one of the keys to expanded access and opportunities in education. **It is essential for Governments to develop financing formulas that prioritize need, ensuring that the poorest regions and most marginalized groups, including girls, children with disabilities and indigenous peoples, are carefully targeted for support. In that regard, public transparency and accountability mechanisms should be introduced to ensure the effectiveness and equity of policy interventions. The involvement of communities and citizens in the design and supervision of public programmes can increase their effectiveness and reduce administrative burdens.**

59. Broad-based measures are needed to strengthen the quality of the learning environment. The rapid expansion of enrolment worldwide has not yet been matched by a similar advancement in learning achievement in skills. **Ensuring that exceptionally effective teachers reach children upon entry into schooling, and providing incentives for more equitable teacher deployment to underserved areas are two ways of doing it. The development of more relevant education curricula that address both local contexts and broader global changes can also help improve students' retention rates and enhance learning outcomes. Providing school feeding and nutrition programmes can further contribute to children's learning capacity once they are in school.**

B. Building resilience to income shocks

60. Early investment in crisis prevention through social protection is more efficient and has better long-term results than reaction after the event. **Therefore, effective social insurance and social protection programmes should be put in place and maintained to mitigate the damages caused by households' exposure to risk and increase the likelihood that children stay in school.**

61. There is extensive evidence that social safety nets and cash and food transfers can prevent the withdrawal of children from school during economic shocks, adverse weather events and other crises. **Intersectoral policies are needed to address multiple barriers to entry, attendance and achievement and must be designed carefully since the reasons that keep children from enrolling and staying in school are varied and complex.**

62. Food security, nutrition and learning outcomes are closely interrelated, and those interlinkages need to be reflected in social policy formulation. Successful food and cash transfer programmes have been found to improve household food consumption and increase the use of education and health services among recipient households, and are even associated with better cognitive and language skills, fewer behavioural problems among certain age groups and improved enrolment and attendance. Such programmes address nutrition issues commonly faced by school-age children and offer an incentive for households to send their children to school, with particularly strong effects for girls' enrolment. **In-school nutrition interventions, including school feeding programmes, should be integrated into national education plans. Provision of micronutrients through fortified school**

meals, combined with other school-based health interventions, such as deworming, brings additional benefits to children's cognitive abilities and educational achievement.

63. Human development indicators remain correlated with the health and education profiles of parents in many societies. Malnourished mothers tend to deliver babies with lower birth weight and iodine deficiency, which are associated with lower educational aptitudes in children. **Therefore, the education of young mothers and mothers-to-be is critical to ensuring good health and education outcomes for the next generation.**

64. For farmers, in particular smallholders, high food prices can create opportunities for increased earnings through enhancing agricultural productivity and rural development, which will also benefit households in local urban areas with rapidly expanding populations. **Building longer-term resilience should include a range of in- and out-of-school educational and training programmes that promote sustainable food and nutrition security while increasing agricultural productivity and expanding access to local, regional and global markets. Policies linking school feeding and nutrition programmes with agricultural production would also reap major dividends nationally.**

C. Developing skills for twenty-first century challenges and opportunities

65. Technical and vocational education and training programmes can provide opportunities for young people and adults to increase skills and learning. They play an important role in strengthening the transition from school to work and by offering second chances to school leavers and combating social exclusion. **Governments should move from a top-down, supply-driven model of technical and vocational education and training provision towards a demand-driven approach that responds to the needs of individuals, companies and the economy. Such programmes should be designed to develop broad skills with an emphasis on problem-solving, "learning to learn" and entrepreneurship in order to link basic education systems more effectively to twenty-first century sectors, such as jobs in the "green" and knowledge economies.**

66. **Education for disaster risk reduction and preparedness needs to be reinforced in order for communities to anticipate and address the impact of natural disasters in an agile and comprehensive manner, especially in areas that are already experiencing multiple deprivations. In order to make the greatest impact within communities, education for disaster risk reduction and preparedness should be promoted through both formal curricula and informal education.**

67. Developing educational strategies for climate change adaptation and mitigation can promote a better understanding of local environments, change consumption and production patterns and help anticipate future ecological threats. Teaching sustainable resource management and energy-saving and resource-conserving behaviours not only promotes sustainable lifestyles but can also lead to cost savings. **Education for sustainable development with a particular focus on climate change adaptation and mitigation should be expanded to produce immediate tangible benefits.**

68. Access to low-cost ICT should be recognized as providing a catalytic and contributing role in attaining education goals. **In contexts where financial resources are limited, the creation of community technology centres in schools, which serve students and the broader community, is an efficient way of making access more readily available, especially in rural areas. In addition, any policy introducing ICT into education curricula must address the needs of teachers, with the relevant training made easily accessible to them.**

69. **Governments should develop national ICT and broadband strategies in order to close the widening access gap to broadband between regions. A number of different models have been implemented through public-private partnerships utilizing public subsidies or providing financial incentives to private operators to expand access to underserved areas.**

D. Promoting migration for education

70. Countries facing human resource shortages in key social sectors, such as education, require appropriate intersectoral strategies for educating and retaining key professionals at home. **In order to offset the effects of skilled emigration, enhanced cooperation between countries that share migrant flows is necessary. Policy options that support managed migration systems, for example, a coordinated regional migration policy that allows for greater levels of circular migration, help alleviate shortages and recoup returns to national investment in human resource development. Countries should also expand opportunities for research, innovation, entrepreneurship and decent working conditions at home, which might stimulate a return flow of migrants and capital.**

71. Governments in origin and destination countries can facilitate remittance flows and enhance their impact through the coordination of appropriate policies. **Countries can increase banking access to migrants and their families by reducing the transaction costs associated with sending remittances through banking channels. Encouraging remittances through formal banking channels or special matching programmes that provide incentives for investing in local infrastructure can also improve their potential development impact. In rural and remote areas, access to those services could be improved by encouraging the participation of microfinance institutions, credit unions and savings banks in the remittance market.**

72. Both internal and international migrants should have equal access to the full range of public services and benefits, especially education, health and social assistance, regardless of their residence status. **In particular, Government policies should seek to facilitate, not hinder, the process of internal migration. At the same time, the universal provision of education and other services should also be secured in places experiencing large number of net outmigration.**

E. Revitalizing the global commitment to education

73. Low-income countries still receive less than half of all aid to basic education. **Accelerated progress towards the Education for All goals requires donors to honour the overall aid commitments made in 2005 and to strengthen their commitment to basic education. Donor cooperation could be strengthened using**

a pooled funding mechanism, such as a Global Fund for Education, which could achieve more and at a quicker pace than when donors act alone. International health funds provide an example of the gains that can be generated by sharing financing resources and working through a multilateral fund with a single set of requirements for funding requests, disbursement and reporting.

74. Just as in national education sectors, the quantity of donor resources cannot substitute for the quality of aid delivery. If recipients cannot rely on donor commitments, they cannot develop and implement medium-term financing plans for achieving education goals. Predictability is particularly weak in conflict-affected countries. **Donors and recipients need to intensify their efforts to make aid more effective. Predictability is critical to aid effectiveness; unexpected shortfalls can have highly damaging effects on education, disrupting infrastructure expansion plans and limiting the resources available to hire and train teachers.**

75. Education comprises a large share of programme-based aid, and in some countries, donors are pooling funding for education, working through national systems and sharing reporting structures. In other cases, donors have cooperated in supporting reforms in planning, reporting and auditing to facilitate pooled financing arrangements and increase aid in support of the national education strategy. **Better alignment of aid to Government programmes and coordination of activities among donors are crucial to ensuring the effectiveness of aid for education. In particular, non-Development Assistance Committee donors and private philanthropic financing should be actively included in planning for improved aid harmonization.**

F. Peacebuilding through education

76. While the delivery of education services has been increasingly integrated into humanitarian response systems, the intensity of environmental crises, long-term conflicts and ongoing threats to humanitarian space pose persistent challenges to delivering quality education in the aforementioned settings. In emergency situations, a lack of coordination between the Government, community and myriad non-governmental organizations often obstructs access to and the continuation of quality education. **There is an urgent need to recognize the vital role of education during conflict-related emergencies. Current systems for assessing the education needs of conflict-affected communities should be strengthened. In conflict-affected countries, education systems and curricula must be designed with reconciliation and resolution as their focus in order to mainstream social cohesion into children's learning. To unlock education's potential to nurture peace, Governments and donors should prioritize the development of inclusive education systems, with policies on language, curriculum and decentralization informed by an assessment of their potential impact on long-standing grievances.**

77. **Furthermore, efforts should be made to build an evidence base for the effectiveness of using education to address social, economic and environmental concerns, which can help improve access to funding streams in addition to improving education policy and curriculum development.**

78. Bypassing conflict-affected States is a lost opportunity for conflict resolution and reconstruction efforts and raises the risk of a relapse into conflict. **Donors need**

to break down the artificial divide between humanitarian and long-term aid. Flexibility and innovation in aid requirements are needed for the international community when working in such States. For example, multi-donor trust funds have demonstrated that aid can be increased even in the most difficult circumstances.

79. Schools should be seen first and foremost as places for imparting the most vital skills: tolerance, mutual respect and the ability to live peacefully with others. **States should ensure that policies recognize the right to education in emergencies and should develop preparedness plans for education in such situations, with particular attention paid to traditionally marginalized groups such as girls, children with disabilities and indigenous persons. Governance arrangements for refugees should be reformed to improve access to education. Governments should also strengthen the education entitlements of internally displaced people. Furthermore, Governments should strengthen the systems that monitor and report on human rights abuses affecting education, support national strategies aimed at stopping those violations and impose targeted sanctions on egregious and repeat offenders.**